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Attorney Docket: 071469-0305916
Client Reference: RAJ-012

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re PATENT APPLICATION of:
YAMASAKI et al.

Confirmation Number: 1164

Application No.: 10/673,648

Group Art Unit: 2818

Filed: September 30, 2003

Examiner: Berry, Renee R.

Title: METHOD OF DEPOSITING METAL LAYERS FROM METAL-CARBONYL
PRECURSORS

REPLY TO RESTRICTION REQUIREMENT

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

In reply to the Restriction Requirement dated June 30, 2004, Applicants hereby provisionally elect the invention of Group I, claims 1-40, drawn to a method of depositing a metal layer. This election is made with traverse.

MPEP §803 states: "If the search and examination of an entire application can be made without serious burden, the examiner must examine it on the merits, even though it includes claims to independent or distinct inventions." (Emphasis added.)

Applicants respectfully submit that the search and examination of the entire application can be made without a serious burden, and that the criteria for a proper requirement for restriction between patentably distinct inventions has not been met. Applicants further respectfully submit that the Restriction Requirement is improper and must be withdrawn.

It is respectfully submitted that the search and examination for any one group would necessarily encompass the search and examination for the remaining group. Claim 1 recites a method of depositing a metal layer on a semiconductor substrate including providing a substrate in a process chamber, introducing a process gas in the process chamber, the process gas comprising a metal-carbonyl precursor gas and at least one of a dilution gas and a carrier gas, wherein the ratio of the metal-carbonyl precursor gas flow rate and the process gas flow rate is less than about 0.15.

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Claim 41 recites a processing system for depositing a metal layer on a semiconductor substrate including a process chamber, and a precursor delivery system for flowing a process gas in the process chamber, the process gas comprising a metal-carbonyl precursor gas and at least one of a dilution gas and a carrier gas, wherein the ratio of the metal carbonyl precursor gas flow rate and the process gas flow rate is less than about 0.15.

Regardless of which group Applicants select, the search and examination of the entire application requires the search and examination for a process gas in a process chamber, the process gas comprising a metal-carbonyl precursor gas and at least one of a dilution gas and a carrier gas, wherein the ratio of the metal-carbonyl precursor flow rate and the process gas flow rate is less than about 0.15. Accordingly, the entire application can be searched and examined without a serious burden.

Reconsideration and withdrawal of the Restriction Requirement are respectfully requested.

Respectfully submitted,

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